



Attorney General of New Mexico



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23 June 2003

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Dear Steve:

At the April 10, 2003 WIPP Quarterly Meeting in Carlsbad, Department of Energy (DOE) personnel requested that this Office put in writing its concerns as to certain language in the WIPP HWA permit. Specifically, the discussion involved permit terms describing when a transuranic waste shipping container, observed to be internally contaminated on its arrival at WIPP, may or should be opened for remedial action with respect to leaking waste containers. I had expressed the general view that the occasions for undertaking difficult and potentially risky repair work should be clearly delineated, with an eye to limiting such operations. This letter seeks to respond to that request. Thus, this letter submits comments by the Water, Environment, and Utilities Division of the New Mexico Attorney General's Office concerning a proposed modification to the Hazardous Waste Act permit for the Waste Isolation Pilot Plant (WIPP).

This issue came to the fore as a result of the incident in August 2002, when a WIPP truck was struck in a minor highway accident and thereafter—possibly as a result, but possibly not—contamination was found inside the TRUPACT-II container. The

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WIPP site personnel then determined that the container should be returned to the shipper, Idaho National Engineering and Environmental Laboratory (INEEL). This decision was the correct one. However, it is not clear that the WIPP HWA permit required such result. It should so require, to limit the risk of release of radioactive or hazardous materials.

The events of last August were as follows. Very early on Sunday morning, August 25, 2002, a loaded WIPP truck on Route 62-180 near Carlsbad was hit from the rear by a pickup truck. Externally, the WIPP truck was slightly damaged. State personnel inspected it and did a radiation survey, which was negative. A flat tire was changed. The truck proceeded to WIPP for unloading. The truck carried two TRUPACT-II containers. The front one, no. 151, was opened, and the load was normal in all respects. The rear TRUPACT-II, no. 157, was opened, and no contamination was found on the exterior, the interior of the outer containment vessel (OCV), or the exterior of the inner containment vessel (ICV). Then, pursuant to normal procedures, air was drawn through a tap and filter from the interior of the ICV, and the filter was analyzed. In these analyses contamination by plutonium 139 and americium 241 was found. CBFO decided to send the contaminated TRUPACT-II back to the generator site, INEEL. Later investigations at INEEL point to the shipper's failure to tighten the bolt that secures a locking ring on one of the drums as the likely cause of the contamination.

The HWA permit refers to decontamination of contaminated containers in Attachments F and M. Attachment F (RCRA Contingency Plan), discussing receipt of mixed waste containers at WIPP, states:

“Under some circumstances, if contamination is detected, the shipping container and/or the TRU mixed waste containers will be decontaminated.” (F-5).

A footnote states that “typically” contamination less than six square feet in area and less than 2000 disintegrations per minute alpha or 20,000 disintegrations per minute beta/gamma may be decontaminated. Clearly, guidelines based on the area or intensity of the contamination can only be applied if such factors can be measured. The note adds: “Containers that exceed these thresholds will be returned to the point of origin for decontamination.” (Note 1 at F-5). In addition, Attachment F states elsewhere (possibly—but not clearly—referring to times other than immediate receipt of waste) that contamination “exceeding the small area ‘spot’ decontamination levels” should be remedied by overpacking, which will be done within the Waste Handling Building (WHB) unit. (F-25).

Thus, Attachment F directs the WIPP site to take various remedial actions in response to a contaminated or leaking container. Contamination exceeding the DOE free release limits, but not exceeding 100 times those limits, may be remedied by decontamination. Containers arriving with contamination in excess of that limit should be returned—or they may be overpacked. No detailed directions for these procedures are set forth.

Attachment M1 (Container Storage) also addresses contamination identified upon receipt of waste containers at WIPP. First, the permit refers generally to the alternatives available if a drum shows contamination upon receipt. The language mentions possible return of the shipping container, but it is not restrictive:

“Upon receipt and removal of CH TRU mixed waste containers from the TRUPACT-IIIs, the waste containers are required to be in good condition as provided in Permit Module III. The waste containers will be visually inspected for physical damage (severe rusting, apparent structural defects, signs of pressurization, etc.) and leakage to ensure they are in good condition prior to storage. Waste containers will also be checked for external surface

contamination. If a primary waste container is not in good condition, the Permittees will overpack the container. The Permittees may initiate local decontamination, return unacceptable containers to a DOE generator site or send the TRUPACT-II to the third party contractor. Decontamination activities will not be conducted on containers which are not in good condition, or which are leaking. If local decontamination activities are opted for, the work will be conducted in the WHB Unit on the TRUDOCK. These processes are described in Section M1-1d.” (At M1-4).

More specific language in Section M1-1d also addresses contamination found when waste is received. Again, the level of action depends on whether contamination exceeds 100 times the DOE free release limit. The permit directs Permittees to (1) decontaminate the container if the contamination does not exceed 100 times the free release limit or (2) overpack it. Thus, in this discussion, there is no reference to returning the container to the shipper; to the contrary, the permit directs that leaking containers be overpacked:

“Under normal operations, it is not expected that the waste containers will be externally contaminated or that removable surface contamination on the shipping package or the waste containers will be in excess of the DOE’s free release limits (i.e., 20 disintegrations per minute (dpm) alpha or 200 dpm beta/gamma). In such a case, no further decontamination action is needed. The shipping package and waste container will be handled through the normal process. However, should the magnitude of contamination exceed the free release limits, yet still fall within the criteria for small area ‘spot’ decontamination (i.e., less than or equal to 100 times the free release limit and less than or equal to 6 ft² [0.56m²]), the shipping package or the waste container will be decontaminated. Decontamination activities will not be conducted on containers which are not in good condition, or containers which are leaking. Containers which are not in good condition, and containers which are leaking, will be overpacked. In addition, if during the waste handling process at the WIPP a waste container is breached, it will be overpacked. Should WIPP structures or equipment become contaminated, waste handling operations in the affected area will be immediately suspended.” (M1-1d(2), at M1-10).

Still further language in Attachment M1 also addresses contamination discovered “during unloading.” (At M1-11). Again, action is determined by the presence or absence of “large area” contamination. The permit states that, in the case of such contamination,

the shipper must take responsibility, and the shipper, not Permittees, is authorized to decide the disposition of the container. (However, there is no provision for notification to the shipper or recording its decision.):

“In the event a large area decontamination is discovered within a TRUPACT-II during unloading, the waste will be left in the TRUPACT-II and the shipping container will be resealed. The DOE considers such contamination problems the responsibility of the shipping site. Therefore, the shipper will have several options for disposition. These are as follows:

- The TRUPACT-II can be returned to the shipper for decontamination and repackaging of the waste. Such waste would have to be re-approved prior to shipment to the WIPP.
- Shipment to another DOE site for management in the event the original shipper does not have suitable facilities for decontamination. If the repairing site wishes to return the waste to WIPP, the site will have to meet the characterization requirements of the WAP.
- The waste could go to a third (non-DOE) party for decontamination. In such cases, the repaired shipment would go to the original shipper and be recertified prior to shipment to the WIPP.” (M1-1d(2), at M1-11, M1-12).

With this permit structure, following the August 25, 2002 highway incident, the lid was removed from the OCV of TRUPACT-II no. 157, the atmosphere within the ICV was sampled, and contamination was found. Not having opened the ICV, WIPP personnel were unable to determine the areal extent of the contamination, *i.e.*, whether the situation involved “large area” contamination. Logically speaking, one or more containers was “not in good condition” or was “leaking,” but the drums were not visible to determine this. At this point CBFO decided to proceed no further in opening the TRUPACT-II. WIPP personnel did not remove, decontaminate, or overpack any drums. From the CBFO report to NMED (Letter, I. Triay to S. Zappe, Sept. 13, 2002), CBFO, not INEEL, directed the return of the contaminated TRUPACT-II to INEEL.

This sequence suggests the need for clarification of the permit as to contaminated waste containers. It is proposed that the permit follow the general principle of

minimizing decontamination or overpacking at WIPP, to reduce the risks of releases of contamination. The WIPP facility is not equipped to conduct operations best carried out in a hot cell. In addition, the permit should place the incentive upon shippers, who have control of such matters, to pack waste in containers that are in good condition and to load TRUPACT-IIs and HalfPACTs so that drums do not leak. Following such principles, the permit should direct that, if leakage is observed in shipping, the problem is the shipper's responsibility. Specifically, it is proposed that the permit state that an air sample shall be taken from within the ICV in the unloading process, as is current practice. If that sample shows contamination in excess of the DOE free release limit, the container should be opened no further. In such case the shipper should be notified, and the container should be returned to the shipper.

It is our suggestion that the Bureau undertake to modify the HWA permit to incorporate these additional safeguards.

Very truly yours,

A handwritten signature in blue ink, reading "Lindsay A. Lovejoy, Jr.", written in a cursive style.

LINDSAY A. LOVEJOY, JR.
Assistant Attorney General

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